

**Interview Pursuant to 37 C. F. R. §1.133**

Applicants thank the Examiner for an interview of February 17, 2003. The prior art of record cited in the above mentioned Office Action, namely two non-patent publications, *Metallorganischeeskaya Khimiya*, 1992, 5(6), 1386-1390, Abstract and article (Baukova, *et al.*) and Abstract, American Chemical Society, Book of Abstracts, 218<sup>th</sup> ACS National Meeting, Aug. 22-26 (1999), INOR 526, XP009013883 (J. G. Matisons was *et al.*) was discussed with Examiner. An English translation of Baukova, *et al.* was provided to Examiner, as requested.

**Support for Amendments**

Claim amendments are fully supported in the specification and support for the amendments is detailed under sections dealing with the Examiner's objections and rejections.

**Claim Objections**

Applicants acknowledge Examiner's objections to claims 5 and 25 and have amended the claims to correct the informalities. Applicants acknowledge Examiner's objections to claim 42 and will abandon the claim without prejudice to traverse Examiner's rejoining the restricted process claims with the composition of matter claims for allowance. Applicants will deal with the issue of the scope of claim 42 with the Examiner in a corresponding divisional directed to the process.

**Response to 35 U. S. C. §112, 2<sup>nd</sup> ¶ Rejection of Claims 22-25**

In the Office Action mailed December 2, 2003 claims 22-25 have been rejected under 35 U.S.C. §112, 2<sup>nd</sup> ¶ as being indefinite. Applicants respectfully traverse the rejection and contend the amendments made to dependent claims 22-25 obviates the Examiner's rejection. Applicant have amended claims 22-25 to claim the catalyst composition supported in the application. Support for the amendment to claims 22-25 is

found at page 3, lines 1-12; at page 4, lines 1-3; at page 5, lines 16-23; at page 16, line 16 to page 17, line 30; at page 5, lines 4-9; at page 13, line 24 to page 16, line 14; and at page 10, lines 23-29.

**Response to 35 U. S. C. §102(b) Rejection of Claims 1-4, 6, 14, 15 and 21**

Claims 1-4, 6, 14, 15 and 21 have been rejected under 35 U.S.C. §102(b) as being anticipated by a non-patent publication, Metallorganischeeskaya Khimiya, 1992, 5(6), 1386-1390, Abstract and article in Russian. Applicants have provided Examiner with an English translation of the article. Applicants respectfully traverse the rejection and contend the amendments made to independent claims 1 and 21 obviates the Examiner's rejection. Applicant have amended claim 1 and amended dependent claim 21 to independent claim 21, both claims incorporating the limitation that olefin-based materials are one or more polymers having a plurality of olefin groups. Amended claims 2-4, 6, 14 and 15 are dependent on claim 1 and incorporate the limitations. Support for the amendments is found at page 3, line 30 to page 5, line 26 and at page 8, line 10 to page 13, line 22.

Applicants respectfully submit that all of the limitations of a claim must be taught in establishing a *prima facie* case of anticipation pursuant to 35 U. S. C. §102(b). Baukova *et al.* does not teach the Applicants invention as claimed. Baukova teaches that different hydrozirconating compounds ( $\text{Cp}_2\text{ZrH}_2$  and Schwartz's reagent  $\text{Cp}_2\text{ZrH}(\text{Cl})$  respectively) provides not only different types of hydrozirconated compositions but provides compositions that are different from Applicants compositions. Moreover, Baukova *et al.* also teaches that reaction of polybutadiene with Schwartz's reagent does not provide a porous particulate material, but affords an inadequately characterized substance that is readily soluble in aromatic hydrocarbons and sensitive to moisture and oxygen. Thus, independent claims 1 and 21 as amended and dependent claims 2-4, 6, 14 and 15 are patentable over the prior art document of record. Applicants respectfully

submit that the Examiner's arguments with respect to the §102(b) rejection have been obviated for amended claims 1-4, 6, 14, 15 and 21.

**Response to 35 U. S. C. §102(b) Rejection of Claims 1-3, 9-15 and 21**

Claims 1-4, 6, 14, 15 and 21 have been rejected under 35 U.S.C. §102(b) as being anticipated by a non-patent publication, Abstract, American Chemical Society, Book of Abstracts, 218<sup>th</sup> ACS National Meeting, Aug. 22-26 (1999), INOR 423, XP009013883 (J. G. Matisons *et al.*). Applicants have provided Examiner with Abstract and search of related articles and have found no related article. Applicants respectfully traverse the rejection and contend the amendments made to independent claims 1 and 21 obviates the Examiner's rejection. Applicant have amended claim 1 and amended dependent claim 21 to independent claim 21, both claims incorporating the limitation that olefin-based materials are one or more polymers having a plurality of olefin groups. Amended claims 2, 3 and 9-15 are dependent on claim 1 and incorporate the limitations. Support for the amendments is found at page 3, line 30 to page 5, line 26 and at page 8, line 10 to page 13, line 22.

Applicants respectfully submit that all of the limitations of a claim must be taught in establishing a *prima facie* case of anticipation pursuant to 35 U. S. C. §102(b). Matisons *et al.* does not teach the Applicants invention as claimed. Matisons *et al.* teaches supported metallocenes prepared by reacting silica with a vinylsilane followed by reaction with a hydrozirconocene. Thus, independent claims 1 and 21 as amended and dependent claims 2, 3 and 9-15 are patentable over the prior art document of record. Applicants respectfully submit that the Examiner's arguments with respect to the §102(b) rejection have been obviated for amended claims 1-3, 9-15 and 21.

**Response to 35 U. S. C. §103(a) Rejection of Claims 16 and 26**

Claims 16 and 26 have been rejected under 35 U.S.C. §103(a) as being unpatentable over a non-patent publication, Abstract, American Chemical Society, Book of Abstracts, 218<sup>th</sup> ACS National Meeting, Aug. 22-26 (1999), INOR 526, XP009013883 (J. G. Matisons *et al.*). Applicants have provided Examiner with Abstract and have found no related article. Applicants respectfully traverse the rejection and contend the amendments made to independent claims 16 and 26 obviates the Examiner's rejection. Applicant have amended claim 1 which claim 16 is dependent upon and amended claim 26, which is dependent on amended claim 1, to limit the dependent claim to polymers. Support for the amendments is found at page 3, line 30 to page 5, line 26 and at page 8, line 10 to page 13, line 22.

Applicants respectfully submit that all of the limitations of a claim must be taught in establishing a *prima facie* case of obviousness pursuant to 35 U. S. C. §103(a). Matisons *et al.* does not teach the Applicants invention as claimed. Matisons *et al.* teaches supported metallocenes prepared by reacting silica with a vinylsilane followed by reaction with a hydrozirconocene. Thus, dependent claims 16 and 26 as amended are patentable over the prior art document of record. Applicants respectfully submit that the Examiner's arguments with respect to the §103(a) rejection have been obviated for amended claims 16 and 26.

**Summary**

Applicants have taught and laid claim to a novel composition comprising a hydrozirconated matrix further which comprises at least one zirconium component and at least one a polymer having a plurality of olefin groups wherein the zirconium component is chemically bonded to the matrix through hydrocarbon groups derived from reacting at least one zirconium compound with covalently bound olefin groups of the polymer. The composition is a porous, particulate material and is used to prepare a catalytic composition by including at least one activator component.

If the Examiner finds that there are some remaining issues to be resolved, Applicants would appreciate the Examiner to grant them a discussion or another interview pursuant to 37 C. F. R. §1.133, to clarify any issues and to place the Application in better condition for allowance. Please charge any fees associated with this response to Deposit Account No. 18-1850. Applicants invite the Examiner to contact the undersigned to discuss any issues related to this application by telephone.

Respectfully submitted,

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